PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES A TRAFFIC SIGNAL MODIFICATION IN CONJUNCTION WITH GEOMETRIC IMPROVEMENTS ALONG EASTBOUND MD 450 (WEST STREET) TO ACCOMMODATE A SEPARATE RIGHT TURN LANE, AS WELL AS GEOMETRIC IMPROVEMENTS ALONG CHINQUAPIN ROUND ROAD TO ACCOMODATE DUAL NORTHBOUND LEFTS. MD 450 IS ASSUMED TO RUN IN AN EAST WEST DIRECTION.

II. INTERSECTION OPERATION

THE EXISTING PHASING AT THE INTERSECTION WILL REMAIN. WESTBOUND LEFT TURNS ON MD 450 OPERATE IN EXCLUSIVE/PERMISSIVE MODE. THE NORTHBOUND APPROACH (CHINQUAPIN ROUND ROAD) OPERATES WITH AN EXCLUSIVE PHASE. NORTHBOUND RIGHT TURNS MAY OPERATE WITH OVERLAP DURING THE WESTBOUND EXCLUSIVE LEFT TURN PHASE ON MD 450.

III. CONTROLLER REQUIREMENTS

UTILIZE EXISTING FULL-TRAFFIC ACTUATED, EIGHT PHASE CONTROLLER WITH SYSTEM PACKAGE, AND ALL MISCELLANEOUS EQUIPMENT HOUSED IN A NEMA POLE MOUNTED CABINET.

IV. SPECIAL NOTES

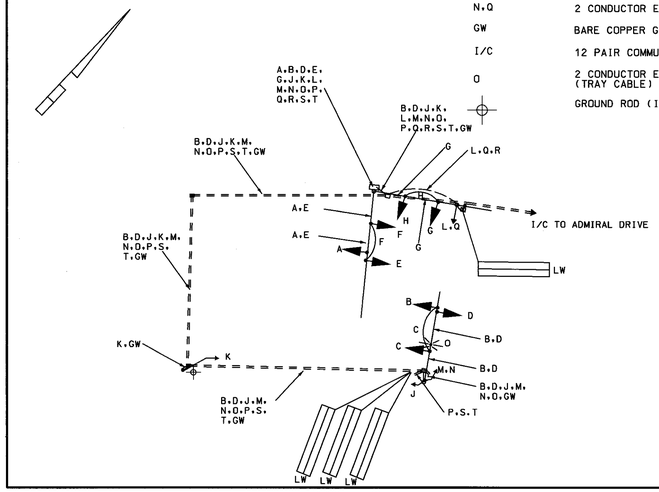
1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00-13, 104.00-19, 104.00-21-104.00-24, 104.09-02, 104.17-02, 104.39-02, 104.41-02, 104.48-02, 104.49-02, 104.81-01, 104.81-02.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING ALL CABLE TO THE CABINET AND SHALL PROPERLY LABEL EACH CABLE.
3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

PHASING SEQUENCE CHART

NO CHANGE TO EXISTING OPERATION

	1	2	3	4	5	6	7	8	9,10	11,12
Phase 2 & 5	R	R	R	◀G-G	◀G-G	G	R	-G▶	DW	DW
5 Change	R	R	R	◀Y-G	◀Y-G	G	R	-Y▶	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	W	DW
Ped. Clear	G	G	G	G	G	G	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	DW	DW
Phase 4	R	R	R	R	R	R	G	G	DW	DW
Phase 4 Change	R	R	R	R	R	R	Y	Y	DW	DW
Phase 4 Alt.	R	R	R	R	R	R	G	G	DW	W
Ped. Clear	R	R	R	R	R	R	G	G	DW	FL/DW
Phase 4 Alt. Change	R	R	R	R	R	R	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK

WIRING DIAGRAM



WIRING DIAGRAM

LW	1 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
P.R.S.T	2 CONDUCTOR ALUMINUM SHIELDED ELECTRICAL CABLE (#14 AWG)
A.B.D.E.G	7 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
C.F.H	5 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
J.K.L.M	3 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
N.Q	2 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
GW	BARE COPPER GROUND WIRE (#6 AWG)
I/C	12 PAIR COMMUNICATION CABLE
O	2 CONDUCTOR ELECTRICAL CABLE (TRAY CABLE)
	GROUND ROD (IN HANDHOLE)

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE STATE HIGHWAY ADMINISTRATION

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
NONE			

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
1	LS	104	Maintenance of Traffic.
1	LS	108	Mobilization.
1	EA	818	Furnish and install 27' steel pole with 38' mast arm
250	LF	805	4" schedule 80 PVC conduit (bored).
2	EA	811	Electrical handhole
700	LF	805	3" schedule 80 PV conduit(trenched).
10	LF	805	1" liquid tight flexible non-metallic electrical conduit.
650	LF	815	Saw cut for loop detectors
30	EA	814	12 in. vehicle signal head section
1	LS	SP	Remove and dispose of existing equipment
750	LF	810	7-conductor (#14 AWG) electrical cable
250	LF	810	5-conductor (#14 AWG) electrical cable
500	LF	810	3-conductor (#14 AWG) electrical cable
250	LF	810	2-conductor (#14 AWG) electrical cable
1	EA	818	14' breakaway pedestal pole
3.5	CY	801	Concrete for signal pole foundation
8	EA	814	12 in. pedestrian signal head section
1500	LF	810	Loop wire encased in flexible tubing (#14 AWG)
1	EA	817	Pedestrian pushbutton and sign
45	LF	800	Furnish and install sheet aluminum signs consisting of: 2 ea. R3-5(L) 30"x36" (overhead) 1 ea. R3-5(R) 30"x36" (overhead) 1 ea. R10-12 30"x36" (overhead) 1 ea. D-3(2) 12"x var. (overhead)
1	CY	205	Test Pit Excavation
1	EA	N/A	Cut, clean, galvanize and cap traffic signal structure.
650	LF	810	12-pair communication cable (jellyfilled)
500	LF	810	2-conductor electrical cable (aluminum shielded)
250	LF	804	Bare copper ground wire, NO 6 AWG.
1	EA	804	Ground rod - ¾ in. diameter X 10 ft.

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION. 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
NONE			

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Design Division
Phone # (410) 787-7630

Mr. Robert Snyder
Assistant Division Chief - Traffic
Phone # (410) 787 7652

Mr. Ed Rodenheizer
Team Leader Signal Operations
Phone # (410) 787-7652

Mr. Eugene Bailey
Team Leader Sign Operations
Phone # (410) 787-7676

Ms. Darlene Eide
Supply Office
Signal Shop Warehouse
Phone # (410) 787-7669

THE CONTACT PERSONS FOR DISTRICT 5 ARE AS FOLLOWS:

Ms. Kim Tran
Assistant District Engineer - Traffic
Phone # (410) 841-1003

Mr. John Mays
Assistant District Engineer - Utilities
Phone # (410) 841-1005

Mr. Charles George
Assistant District Engineer - Maintenance
Phone # (410) 841-1002

WELLS & ASSOCIATES, LLC
TRANSPORTATION, TRAFFIC, AND PARKING CONSULTANTS
1420 Spring Hill Rd., Suite 600
McLean, VA 22102
Phone: (703) 917-6620 Fax: (703) 917-0739
170 Jennifer Rd., Suite 260
Annapolis, MD 21401
Phone: (301) 970-2402 Fax: (410) 266-9189

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

TRAFFIC SIGNAL MODIFICATION PLAN

MD 450 (WEST STREET) & CHINQUAPIN ROUND ROAD

DRAWN BY: WTB	F.A.P. NO. ---	TS NO. 1415C - GI	SHEET NO. 2 OF 2
CHECKED BY: LES	S.H.A. NO. BW996M82		
SCALE: 1"=20'	COUNTY: ANNE ARUNDEL	T.I.M.S. NO. G424	
DATE: 07/15/04	LOG MILE: 0204501O.7I		

...\West & Chinqapin _ GI _ v7.dgn 07/21/2004 01:21:37 PM